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Orlando Horticultural Society Meeting Successful Affair

BY S. LLOYD FRISBIE

A highly successful meeting, was the 54th annual meeting of the Florida State Horticultural Society held in Orlando April 15th, 16th and 17th.

The meeting was one of the most representative of growers from every section of Florida which we have ever attended. Not only was the attendance larger than we remember it before, but the members present represented every section of horticultural Florida.

From the first meeting held on Tuesday night right on through until the final session held Thursday night attendance at the meetings taxed the capacity of the auditoriums of the Orange Court Hotel where all sessions took place.

The programs of the Society were of unusual interest and the reactions of the members in attendance indicated that in major part at least they excited the deep interest of the larger portion of those present.

The Krome Memorial Society sessions were likewise exceptionally well received and the most interesting figure in this group was Dr. David Fairchild, Coconut Grove, whose international reputation attracted many who wished to see and hear him.

The Vegetable Growers Division of the Society attracted greater interest and attendance than at any previous meeting since its organization, which same condition prevailed in connection with the Soil Science Society.

In addition to getting a lot of real

NEW PRESIDENT HORTICULTURAL SOCIETY



H. C. Henricksen

Henry Christian Henricksen, Eustis, Florida, was elected president of the Florida State Horticultural Society for the ensuing year, at the 54th annual meeting of that Society held in Orlando April 15-17.

Born in Denmark April 26, 1869, he was educated in that country receiving the degree of Bachelor of Agriculture from the University of Copenhagen. From 1900 to 1906 he was connected with the U. S. Department of Agriculture carrying out

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benefit from the programs attended, we particularly enjoyed the milling, good natured crowds as they crowded, the hotel lobby, renewing acquaintanceship with friends from other sections of the state and discussing the varied speeches which they had heard.

While temporarily serving as an assistant to Col. Bayard F. Floyd, secretary of the Society, in the matter of accepting annual membership dues to the Society we got a big kick out of having two youngsters, just barely in their teens come up and inquire as to the cost of membership. Upon being advised as to the annual dues the spokesman of the duo stated that they could not join now, but that in a year or two they would be listed as members. Just appealed to us that no higher tribute could have been paid the Society nor the growing interest of the state's future horticulturists.

Then, too, as we sat at the secretarie's desk the echoes of nearby conversations was highly enlightening, in one instance running all the way from a very technical discussion about a certain subtropical shrub or plant which was referred to by the conversationalists with its Latin name, to a discussion of the relative advantages of the farm over the city and vice versa, verring again to a friendly argument over the latest books.

The banquet, a feature started three years ago, taxed the big dining

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The Better Fruit Program

Of The Florida Citrus Commission

E. G. TODD
AT MEETING OF FLORIDA STATE
HORTICULTURAL SOCIETY

On December 21st, 1935, Frank L. Holland and Prof. E. F. DeBusk appeared before the Commission and requested appointment of a committee to meet with them for consideration of a program to improve the quality of Florida fruit. The Commission acted formally in the suggestion a week later and appointed a committee composed of L. P. Kirkland, then chairman of the Commission, Thomas B. Swann, John D. Clark and Earl W. Hartt. Mr. Hartt was the Committee Chairman.

An advisory committee composed of technicians to assist the Better Fruit Committee also was appointed about that time. This committee is still in existence and, as now composed, consists of Dr. A. F. Camp as chairman; Dr. Wilmon Newell representing the State Plant Board; Dr. Herbert Spencer, representing the Bureau of Entomology of the United States Department of Agriculture; Frank L. Holland, representing the insecticide manufacturers; Prof. DeBusk, representing the Extension Division of the University of Florida; Dr. W. W. Yothers, of Orlando, representing the commercial caretakers; H. E. Stevens, representing the Bureau of Plant Industry of the U. S. Department of Agriculture; Prof. Bayard F. Floyd, representing the Florida State Horticultural Society; W. L'E. Barnett and F. E. Gardner, representing the Florida Citrus Growers, Incorporated.

From the beginning of its existence, the Commission has recognized that the placing of quality fruit in the hands of the consumer is one of the most essential elements to a successful citrus industry. Unfortunately Florida has not always been too mindful of this fact. The problem of how to change our practices to accomplish this involves consideration of these five phases: (1) production; (2) harvesting; (3) packing house procedure; (4) transportation; (5) point of sale storage and handling, and all of them are important.

The Commission recognizes that research on production has progressed far ahead of research on the other phases. Information is available today, to any grower who de-

sires to utilize it, telling him exactly what he must do in order to produce high quality fruit. This production research has been going on for many years, in fact long before the Citrus Commission was created by the Legislature. California, Florida, and Texas, and many other states have made contributions to the fund of information on the subject, and this general increased knowledge of plant feeding, as adapted to citrus growing, can be seen here in our own Experimental Station at Lake Alfred. Through the use of the experimental plots there, under controlled conditions as to fertilizer, cultivation and sprays, an opportunity is provided for every grower who wants to produce better quality of fruit to see the evidence for himself under Florida conditions.

Research on the second phase, that of harvesting, has been neglected so far. The Better Fruit Committee has discussed it several times, concluding, finally, that nothing practical can be done about it as long as fruit is sold by the field box and the incentive to get as many fruit as possible into a box exists.

On the third phase extensive research is now being conducted to determine just what processes in a packing house may be harmful and what can be done to correct them. To facilitate this work the Commission has financed the purchase of equipment for an experimental packing house at the Lake Alfred Experimental Station. This equipment is in daily use and is proving of much value to Dr. Camp and the others engaged in this packing house research. It has enabled the Station to make studies, under controlled handling conditions, of coloring room practices, keeping qualities as affected by various wax and disinfectant treatments, and others. It has not been in operation long enough for any sweeping results to be achieved, but it did prove invaluable to the Commission in its efforts to work out proper color charts for enforcement of the break in color provision of the maturity law. This equipment also has been most useful in working out suitable regulations to control the use of the "color add" process, although much work already

had been done on this process by the Experiment Station with its own funds and equipment.

Research on packing house handling also is being conducted by the laboratory of the U. S. Bureau of Plant Industry at Orlando under the direction of J. R. Winston. They have tackled the problem from the standpoint of fruit condition. The principal purpose of this research is to determine if any damage is done to the rind by ordinary practices and if so just where in the packing house this damage occurs. Several packing houses are cooperating and the fruit is taken from various points as it goes through the processing machinery, for instance, from the soak tank, scrub brushes, polisher, grading belt and bins. It is then taken to the laboratory where it is held for varying periods at low temperatures after which it is held for a period at ordinary room temperature. Inspection is made from time to time and the results tabulated.

These studies are now in their second year and are aimed at finding out everything possible about what happens to fruit while it is being processed. It is intended to compile this information at the end of the current shipping season and make it available to the industry.

Research on coloring rooms also is going on both at Lake Alfred and Orlando. A survey conducted under the direction of Dr. Camp in October and November last year showed clearly the lack of uniformity in coloring practices. There appears to be no standardization whatever of construction or method of operating coloring rooms in Florida and many types have been devised and put into operation. It is quite likely that the enormous variation in construction and operation accounts largely for the great difference obtained in results.

When the Commission was called upon to issue a regulation concerning coloring rooms last year this research work furnished the basic information. At Orlando coloring room research has been going on since 1929, and these studies clearly show that the most satisfactory coloring room temperatures are in the low 80's, although in some cases fruit

is being colored at higher temperatures without resulting damage. The best humidity is not definitely established but it can broadly be said to be that which causes no wilting. All fruit, even of the same variety, does not react alike under identical coloring room conditions. Variations in the soil type, root stock, cultivation, fertilization, spraying and handling are only some of the complexities which make it almost impossible to set any hard and fast rules for coloring room procedure.

Since the work of the fourth and fifth phases, namely transportation and point of sale storage and handling, is being conducted largely by one agency they will be considered together.

The Federal Laboratory at Orlando has been assisted financially by the Commission for studies on transportation and refrigeration. Part of this fund went to make up for a cut in Federal appropriations and enable the Bureau to continue its valuable work on citrus fruits. This research is now in its third season and two findings of this program have already saved the industry a substantial sum of money. It has been established that Florida can ship its citrus fruits in pre-cooled cars with no ice except in the hottest months. It has also been found that filling the top half of the bunker with ice is practically as good as filling the entire bunker as far as protective value is concerned. The laboratory is continuing these studies and expects to issue a technical federal bulletin after it has accumulated statistics of three full seasons.

The Orlando Laboratory attempts to simulate actual conditions encountered by fruit being transported to markets and stored prior to distribution to the consumer. It operates a cold storage plant and stores fruit up to a month at a time. They are trying to determine if temperatures around 50 degrees are as effective as those around 35 degrees. The lower temperatures have been found to be the best so far, because fruit holds up better after it is taken out.

Valencias are being stored at the present time and it is hoped to determine just when they should be picked so they will hold up best. These studies should give the industry information of a positive nature as to when fruit should be picked, the best temperature at which it can be shipped and stored, and what effect temperatures have on changes in juice and quality and quantity

and blemishes on the rind. After fruit is taken from the storage plant, it is held at normal room temperatures of about 70 degrees for a week. This simulates actual market conditions. Again the fruit is carefully tested and complete records kept of all findings. This work, while it is now in its third year, is in its first year on citrus commission funds. An annual progress report is made to the industry also made possible by commission funds.

In connection with transportation studies, test boxes of fruit are placed in the car and these are inspected on arrival and again a week later. The Federal Bureau uses its own men at the destination to make these arrival tests, in which the Fruit Growers Express is cooperating.

Perhaps the most important project ever undertaken by the Better Fruit Committee was the issuance of a spray and dust schedule. This schedule has become more important to the industry each season and is accepted as the latest and most authentic information on the subjects covered. Approximately 20,000 copies of the 1940-41 edition have been distributed, and requests have been received from most of the citrus producing areas of the world. Each year the schedule is revised, to include all findings obtained by research during the twelve months prior to its issuance. Many authorities, including Federal, State, commercial and private, participate in its compilation.

Before this schedule was issued, a large number of schedules were available to the grower, but each represented the findings or opinions of a commercial firm selling fertilizers, sprays or dusts, or some other research agency. There was no correlation in these schedules, and the commission's pamphlet has cleared up many misunderstandings and eliminated the multiplicity of schedules which created confusion in the minds of the growers. It presents for the grower the completed program for one season, as differentiated from a program for one particular disease and has done much to standardize practices for pest and disease control in Florida. The condition and appearance of both trees and fruit have been materially helped by this activity of the Commission.

Approximately three years ago, the Commission published a collection of colored photographs of citrus insects, diseases and deficiencies which had been made at Lake Alfred Experiment Station. This color chart proved extremely popular and the edition is now practically exhausted.

Requests were received for copies of it from India, Australia, Palestine, South Africa, Spain, China and several South American countries.

The Citrus Commission also is assisting financially in work now being done at both the Lake Alfred station and the Orlando laboratory to obtain information for possible changes in the maturity law, with particular reference to minimum solids. These studies are providing basic information also on minimum acids and other factors affecting grades. There has been much discussion recently concerning the possible establishment of a grade based on the internal quality of fruit, and the Lake Alfred work on maturity research, along with Federal research, may make it possible to put a workable internal grade into operation.

The Commission also has assisted in establishing standards on the "color add" procedure, and was responsible for the elimination of one dye because of fading. Also it established limitations on temperatures used in the "color add" treatment.

Work is continuing to obtain further information.
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Rust Mites On Citrus

J. R. WATSON
ENTOMOLOGIST, FLORIDA
EXPERIMENT STATION

In many sections of the citrus belt rust mites are beginning to appear on young fruit and it will be necessary from now on until sometime in July to watch our fruit very carefully. After the rainy season becomes well established in July a fungus disease will usually control rust mites fairly well, but the warm weather of April, May and June, together with the relative dryness as compared with the summer months, makes a dangerous period.

The work of Mr. Thompson of our Lake Alfred Station has shown that rust mites attack the young fruit earlier than we had previously supposed and this early type of rust mite injury has a different appearance than that characteristic of their work on somewhat larger fruit. Instead of an even, smooth discoloration the rind shows a mottling effect as the thin epidermis breaks up into small, rough crescent-shaped areas.

Warm dry weather is very favorable for the development of rust mites and they multiply very rapidly. Each female lays on the average about 500 eggs and she may mature in as short a time as seven days; i. e., she may begin to lay eggs when she is a week old, although usually it is 10 to 12 days. It is this rapid breeding which enables rust mites to appear in large numbers so quickly when weather conditions are favorable. Rust mites appear first on the leaves and twigs, and only when the young fruit begins to approach an inch in diameter do they migrate to it. As to just how much injury they may do to the leaves and twigs, we have no very definite information, but the injury to the fruit and to the pocketbook of the grower is only too well known.

The economical way to fight rust mites is to provide one's self with a good magnifying glass and inspect the fruit frequently, particularly during warm dry weather such as we are liable to have for some weeks. Of course, one cannot examine every fruit in the grove but on the other hand do not go into your grove, look at a few of the trees near the gate and then get in your car and drive off with a feeling that you have given it adequate inspection. Rust mites may be scarce in one part of the grove and very abundant in another. Therefore, visit all parts of the grove. Rust mites usually appear particularly on a small tree, first on the

southeast corner of the tree where the morning sun hits them. On a fruit fully exposed out in the bright sun look on the shady side for rust mites; i. e., on the side of the fruit towards the tree. On the other hand, on fruit which is shaded by leaves, look on the outside of the fruit. Rust mites want a good supply of light but usually avoid the direct rays of the mid-day sun.

Those fruits back in the interior of the tree where they are thoroughly shaded from the sun are usually comparative free from rust mites. With this knowledge of where to find rust mites, go through the grove and if you find that half of the "fields" you examine are infested, it is time to apply remedies. By a "field" we mean that part of the fruit which you can see under the glass without moving it. For this inspection the grower should provide himself with a good hand lens magnifying about ten times and not over 15, as the magnifications do not give one a large enough field for rapid work. Such a lens will cost anywhere from \$1.50 to \$6.00 or \$7.00, according to the quality. The chief difference between the cheaper and more expensive lenses the edges of the field will appear blurred where as the more expensive lenses have been corrected for this defect.

The remedy for rust mites is sulfur in some form. In Florida this is applied generally either in the form of a dust of finely ground sulfur or a spray of lime-sulfur and wettable sulphur. The dust is usually mixed with a small quantity of lime to make it go through the duster better. From 5 to 10 pounds of lime are added to 90 to 95 pounds of sulphur dust. The lime does not kill rust mites but simply gives it the mechanical advantage of allowing it to go through the duster more readily. Whether one will find it of greater advantage to dust or to spray the grove will depend upon many circumstances, especially upon the size of the grove. A great advantage of dusting is the rapidity with which it can be applied. It can usually be applied in about one-tenth of the time it takes to spray the grove. In the case of a large grove, this is a great advantage. We have seen how rapidly rust mites multiply when weather conditions are favorable. If it takes a grower a week or ten days to cover his grove with his spray outfit, although

he may begin at the proper time, severe injury may result before he gets around to the last part of the grove. For this reason owners of large groves usually depend upon dusting to control rust mites. Labor considered too, dusting is usually considerable cheaper than spraying.

On the other hand, spraying has distinct advantages, and there is undoubtedly at the present time a trend toward spraying for rust mites, particularly with those growers who have rather small holdings. The chief reason for this is that lime-sulfur spray has a very appreciable effect in controlling scale insects and whitefly. In experiments extending over several years at our Lake Alfred Station, we were able in the case of a moderate infestation of scale insects by three sprayings a year not only to keep down scale insects and whitefly; that is, to prevent their increase, but have often markedly decreased their numbers by this means.

If the grower can control both rust mites and scale insects by a lime-sulfur spray, he is killing two birds with one stone. Lime-sulfur will not kill full grown scales and whitefly. It kills only the crawlers and young stages, but if the young ones are persistently killed off it will finally result in the control of scale insects and whiteflies as the old ones die of old age. Because of this inability to kill full grown scales and whiteflies, we do not recommend lime-sulfur as a clean up spray in the place of an oil emulsion. The latter will be much more thorough. But where the infestation is not so heavy, an application of lime sulfur will often avoid the necessity of an oil spray which is always expensive.

Lime sulfur was formerly applied at about the rate of 1 gallon to 50 of water, but during the past several years the practice has become general of using less of the lime sulfur and fortifying it by adding to each 100 gallons of spray from five to ten pounds of wettable sulfur. This makes a safer spray and one fully as effective. If thoroughly applied to the underside of the leaves in reasonably warm weather this lime sulfur and wettable sulfur spray should also control spider mites, both the 6-spotted mite and the purple mite.

The presence of a good cover crop helps much in the control of rust mites as well as other insects.

Fruit Shipments Greater Than Last Season

Florida's citrus crop escaped any serious natural handicaps during the current season, and in consequence fresh fruit shipments to April 12 this year were 1,476,079 boxes in excess of the volume to the same date a year ago.

The State Citrus Inspection Bureau summary issued recently indicated a total volume of 25,901,882 boxes of all kinds of fruit marketed from the seasonal opening on Oct. 3 through April 12 this year, in contrast to 24,425,801 boxes of grapefruit, oranges and tangerines through April 13, in 1940. The present season's movements amounted to 64,754.8 cars of 400-box capacity, and last season's, 61,064.5 cars.

The 1939-40 season got under way on Sept. 14, 1939, and movements up to and including the fourth week in January, 1940, were practically the same as for a similar period this season. The freeze of late January, 1940, caused a week's embargo from Feb. 3 to 9, and shipments following that date were greatly curtailed, due to the cold damage, accounting for the contrast in volume for the next 10 weeks, as compared to the same period this year.

For comparative purposes, the survey showed that grapefruit shipments this season are considerably ahead of last year, with 6,977,033 boxes to April 12, as contrasted with only 5,161,416 boxes to April 13, in 1940. However, orange movements were greater last season, with 17,190,040 boxes against 16,692,996 this year. Tangerines were ahead in the current season, showing 2,231,851 boxes as compared with 1,977,089 to April 13 last year.

Canneries are using more fruit this year than last (the April 1 figures showing an increase of three million boxes over 1940), but fresh fruit movements the balance of this season are certain to exceed those of last year, due to the larger crop and its escape from any damage by natural causes. Movements from April 14 through June 15 last year totaled only 2,838,983 boxes of all kinds of fruit, bringing the total of fresh fruit shipments from Sept. 14, 1939 to June 15, 1940, to 27,264,784 boxes. Valencia orange volume still to be moved this season is estimated at more than double that fig-

ure, with a fair percentage of the remaining grapefruit destined for fresh fruit markets. Tangerines faded out of the picture early in May last year and only scattering shipments are still being reported this season.

NEW PRESIDENT HORTICULTURAL SOCIETY

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work in Florida and Puerto Rico. From 1906 to 1913 he was doing agricultural work in the West Indies and from 1916 to 1932 he was senior agriculturist in the office of Fruit Investigations of the USDA and member of the Federal Experiment Station in Puerto Rico.

In 1922-23 Henricksen was in charge of the Fruit Growers Research Laboratory in San Juan and in 1913 he came to Eustis where he established the Borinquen Research Laboratory.

President Henricksen has been most actively interested in the affairs of the Horticultural Society, having had a life membership for many years and in 1939 he was awarded the coveted honor of an honorary membership. He has been vice president for a number of years and few men in the state have taken a more active part in the affairs of the Society.

He is a member of the American Association for the Advancement of Science, American Chemical Society and is listed in American Men of Science.

New Officers Named By Florida State Horticultural Society

Orlando — The annual meeting of the Florida State Horticultural Society named the following officers for the forthcoming year at their meeting which closed here Thursday, April 17th:

H. C. Henricksen, Eustis, president.

F. M. O'Byrne, Lake Wales, vice president.

Frank Stirling, Ft. Lauderdale, vice president.

E. W. Hartt, Avon Park, vice president.

Bayard F. Floyd, Davenport, secretary.

Ralph Thompson, Winter Haven, assistant secretary.

Frank L. Holland, Winter Haven, treasurer.

Frank Alexander, Bartow, sergeant at arms.

Executive Committee

C. D. Kime, Gainesville.

W. F. Ward, Brooksville.

Floyd L. Ray, Hollywood.

Lem P. Wood, Tampa.

R. S. Edsall, Wabasso.

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DIVERSIFIED INDUSTRY

It is a far cry from the days not so long ago when oranges were considered a luxury to be indulged only during the Christmas holidays and other special occasions; when grapefruit adorned the tables of the wealthy simple as a novelty, while the poor refused to be inveigled into eating the "bitter stuff," to the present day of almost universal consumption.

Gradually, oranges gained in popularity. Increased production, lower prices and the growing demand of the people for more fruit in the daily diet have combined to make oranges one of the most popular of fruits. Still more gradually has grapefruit grown in popularity. Prejudice against its "bitter" taste has disappeared and its medicinal qualities have given it high rank as a health food. Today, canned grapefruit juice and grapefruit hearts have made this fruit available the year 'round when fresh fruit is out of season. In recent years citrus wines have come into favor.

Limes and lemons provide refreshing, appetizing and cooling drinks, and the thrifty housewife has long made use of citrus fruits in marmalades and jams. Pies and other desert dishes made from citrus fruits are familiar objects on every table.

But not alone is citrus fruit considered an essential part of human diet. Grapefruit pulp and grapefruit hulls have been converted into stock food supplying essential elements said to be as valuable as beet pulp in the production of milk when fed to dairy herds. Owners of beef cattle, too, have experimented with this new citrus feed with favorable results.

Recently it has been announced that citrus fruits have been utilized in the manufacture of a high explosive more powerful than gunpowder or dynamite or even TNT. Army officers are said to be experimenting with this new explosive.

At the other extreme we have an orange syrup, recently put upon the market by an enterprising citizen, which is being served in many of the high class eating places of the state. Residents and winter visitors have found it excellent and its use outside the state may be anticipated at an early date.

Citrus is indeed a diversified industry and it is probable that its manifold uses have not as yet been fully discovered.

BIENNIAL CITRUS FIGHT IS ON

Factional controversies between divergent elements in the citrus industry of the state, which spring up every two years with the convening of the Florida legislature, arrived on schedule this year.

A bill sponsored by the Florida Citrus Producers Trade Association, the United Growers and Shippers Association and the Florida Cannery Association called for numerous changes in the present citrus laws, most of which are intended to strengthen present laws. Among other things asked for in the bill was a higher standard for fruit to be colored, reorganization of the Florida Citrus Commission; a two-cent advertising tax on oranges in place of the one-cent tax now in effect, and other modifications in the present law.

The Florida Citrus Growers Inc., an organization of citrus growers, asks for outright abolition of the coloring process. Representatives of that organization from Lake county have also introduced a bill to reduce the advertising tax to a flat one-cent per box on all varieties to replace the present tax of one cent per box on oranges, three cents on grapefruit and five cents on tangerines.

The Volusia county unit of the Florida Citrus Growers Inc., has adopted a resolution calling for the abolition of the Florida Citrus Commission, has asked other county units to join them in the move and has instructed the Volusia representatives in the legislature to sponsor a bill abolishing the Commission.

Another group of growers in Hillsboro county advocates the repeal of all laws governing the industry. This group demands the right to ship unprocessed fruit without restriction as to grade, size and pack.

Hardest fight probably will center on the "color-added" provision of the so-called "industry" bill, but with so many propositions submitted by so many different groups it is hard to predict what the legislature may do. Heretofore, the legislature has been disposed to give the industry what it asked for. Two years ago the program submitted by the growers' organization was approved with practically no change. With the industry now divided into four or more groups, the legislators cannot be particularly blamed if they demand that the different groups get together on a program before asking the legislature to act.

A GREAT MEETING

The recent meeting of the Florida State Horticultural Society at Orlando was one of the most largely attended of any in recent years. Those in attendance are agreed that it was also one of the most interesting and instructive gatherings in the history of the Society.

Papers covering practically every phase of Florida horticulture were given by men of practical experience and varied research. Some of these papers appear in this issue of The Citrus Industry and others will be published in succeeding issues.

The officers of the Society, the executive committee and the members responsible for the
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THE BETTER FRUIT PROGRAM OF THE FLORIDA CITRUS COMMISSION

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ther information on the break in color provision. This research has been handicapped because funds were not made available to the station until late in 1939, and it will also be recalled that the 1939-1940 season was late blooming and abnormal in other respects. The results obtained so far are not at all conclusive and a normal season may present numerous difficulties of enforcement.

Another difficulty that now exists is that the human eye must be depended upon to make the comparison under varying conditions of light, whereas the only absolutely positive test would be under circumstances where all elements are controlled.

This would require standardized and filtered lighting, which is quite expensive, and the use of color measuring machinery. Dr. Camp worked out a device which spins the fruit at high speed thereby blending all of the yellow and the green to one solid color. This is compared with the color charts adopted by the Commission and fairly satisfactory field results were obtained this season. It is still hoped, however, that some comparatively simple process, acceptable to the entire industry, will yet be devised to enforce the break in color provision and that proper color charts will be developed in time.

Research is also being continued in an effort to find a substitute for borax as a disinfectant, but so far nothing has been found which is superior. Borax is the cheapest, safest and

best of all the several hundred chemicals which the laboratory has tested for this purpose.

Research work is not spectacular and requires patience and thoroughness. It is, however, an essential adjunct to any well rounded industry program. The Better Fruit Committee, composed of A. S. Clarke, of Eustis; John M. Criley, of Terra Ceia; John Knight, of Vero Beach, and E. G. Todd, of Avon Park, has kept in touch with all of these research projects and is attempting to develop and execute a comprehensive program which eventually will make available for the industry all of the necessary information to produce, harvest, transport and deliver in good condition to our consumers fruit of the highest quality which Florida is capable of producing.

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Extra Value Vital Element Brands Do This Job Better For May Florida Growers

Our company to include all of the essential Vital Elements was revolutionary, we will admit, because it was customary to apply such elements in local applications, if we knew that the inclusion of these ten elements in our fertilizers resulted in bigger and better crops than is the case now. The result has been that we have served our customers effectively.



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Superior Fertilizer Company

G. D. Sloan, Pres.,

P. O. Box 1021

Head Office East Broadway At 47th Street, Tampa, Florida



Controlling Diseases In The Home Garden

W. B. TISDALE

With increasing limitations on the number and kinds of crops that can be grown for sale, more emphasis is being given to a "live-at-home" program. This program calls for more attention to a home garden. Furthermore, all accepted standards of nutrition include vegetables as requisites for a balanced diet. The home garden is the cheapest, as well as the best, form of health insurance that you can buy. For these reasons, a farm is incomplete without a home garden.

A good home garden is not expensive or hard to produce. With care in the selection of varieties, fertilization, and cultivation, an ample quantity of good quality vegetables can be grown on a small area to supply a family the year round. Each farm can produce all the fresh vegetables the family can use during the spring and summer months and plenty to can for the winter. Such a continuous supply of fresh vegetables will be an advantage financially as well as for improving health of the family. High quality vege-

tables are as desirable for home consumption as for the market.

Anyone who has ever attempted to grow vegetables knows that his efforts are not always rewarded by 100 percent success. There may be several reasons for this. Sometimes unfavorable weather may be responsible. Certain varieties are unsatisfactory because they are planted in the wrong season of the year; the wrong kind or amount of fertilizer is sometimes responsible for failure. Failure may also be due to plant diseases. By studying response of the plants to various conditions and treatments one may soon learn how to grow the most suitable varieties. All plants are susceptible to disease of some kind and may be attacked when they are grown in small numbers or in large acreages. Unless some thought is exercised in the planting and care of the garden, plant diseases will sooner or later take their toll in the form of reducing the yield and quality of the crop.

I will suggest some measures which may be employed to reduce

the damage caused by diseases in the home garden. One cannot afford to buy expensive spray machinery and spray materials to use in a home garden. Moreover, they could not be used to advantage on small areas of mixed vegetables. It is possible, however, to manage the garden in such a way that damage due to diseases can be greatly reduced at little cost. Most of the measures involved in such a program can be summarized in the word "sanitation." The home garden can be observed frequently so that diseases may be detected early in their development. For this reason, it is feasible to employ sanitary measures that would be impractical with large acreages.

To be most effective, this program must be started before the seeds are planted. Plant seed of cabbage, eggplant, lettuce, peppers, tomatoes and other crops that are usually transplanted in boxes of soil obtained from the woods or other fertile uncultivated areas. Such soils are more apt to be free of fungi that rot the seeds and cause damping-off of the

The Addition Of The Swift Program For Controlled Tree Feeding Means The Multiplication Of Your Profits

Just as one example we cite a grove which has been under our direction since 1936. In 1936 this 80-acre grove produced 7561 boxes of citrus and showed a NET PROFIT of \$8,835.57, an average of \$110.44 per acre.

In 1940 this grove had grown to 95 acres and produced 34,000 boxes of fruit at a NET PROFIT of \$30,960.14, an average of \$305.90 per acre.

This is only one of many — You'll find it profitable to investigate.

You, Too, May Profit By This Program If You Will

Swift & Company Fertilizer Works

BARTOW, FLORIDA

A Division of Swift & Company

EDITORIAL

(Continued from page 10)

arrangement of the program are to be congratulated upon the success of the meeting. The Florida State Horticultural Society has done

and is doing a great work for the citrus growers and other horticulturists of the state, and the interest shown in the Society by the growers as demonstrated at the Orlando meeting is gratifying indeed.

young seedlings. Sow the seed thinly and cover them from $\frac{1}{4}$ to $\frac{1}{2}$ inch deep. Water enough to keep the plants stocky and vigorous. Keep the boxes in the sunlight at least half of each day.

Transplant the seedlings to the garden in thoroughly prepared and fertilized soil. If your garden is on the same area used for that purpose last year, plant the eggplants, peppers and tomatoes where you grew corn or peas last year. Indeed, rotate all crops so as to avoid planting the same or closely related crops in the same place two years in succession.

There are some organisms which cause plant diseases that live in the soil and when the same crop is grown on the same land year after year the disease may become more destructive each succeeding year. Wilts of tomato, pepper and eggplant are diseases of this kind. There is no convenient method for determining whether these organisms are in the soil until susceptible plants show signs of the disease. If wilt develops in the plants, there is nothing you can do this year to cure the diseased plants. Wilted plants cannot be cured. Pull them up and burn them to keep the organism from multiplying in the garden and increasing the danger of greater loss next year. Next year, plant corn or cucumbers in that area of the garden, and buy a wilt-resistant variety of tomatoes.

Certain diseases of vegetable crops are carried on the seed, and there is no convenient method for determining which ones are infected before planting. Soil conditions which cause the seed to germinate also encourage growth of the disease-producing organism. Thus, the seedling and parasite grow up together and the infected seedling may die or show signs of disease when it is very small. During rainy weather the parasite spreads from this plant to nearby healthy plants. If the first plants which show wilting or leaf spots are pulled out and destroyed early in their growth, spread of the disease can be prevented to a great extent. This will also reduce the numbers of the organisms that remain in the soil. Once they have been introduced into the soil, some seed-borne organisms remain viable from one season to another and attack the same kind of healthy plants when they are planted on the same soil. This is an-

other reason for rotating crops each year. In fact, after all usable plants or parts of plants have been consumed, remove the refuse from the garden and feed it to the chickens, or hogs, or burn it.

Seed that are planted in the garden, when the soil is cool, should be covered lightly so they will germinate promptly. If the soil is dry, water is to encourage germination. Seed that remain in the ground for an undue period of time are more apt to rot or to give rise to weak plants than are the ones that germinate promptly. If it is necessary to thin the stand, remove the weak plants. With slight expense, cucumber, squash and spinach seed can be treated with red copper oxide before planting for improving the germination in cool wet soil.

Thus, by exercising care in planning and planting the garden, you can control many of the plant diseases which would reduce the quantity and quality of vegetables.

There are certain leaf diseases which may attack vegetable crops after these measures have been employed. Spraying tomatoes, peppers, eggplants, and cucumbers with bordeaux mixture or other copper-containing fungicides will prevent development of certain leaf diseases and prolong the bearing period. Dusting beans, peas and squash with sulphur will check the development of the white powdery mildew which often attacks the leaves.

If you wish more detailed information on spraying or dusting any crop write the Agricultural Experiment Station, Gainesville.



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Pruning Ornamental Trees and Shrubs

By H. S. WOLFE, Head
Department of Horticulture

Probably no phase of the growing of ornamental plants is a little understood by the average gardener as their proper pruning, and yet an understanding of why and when to prune can add greatly to the satisfaction derived from our trees and shrubs. The reason for the widespread ignorance of this phase of gardening is not hard to find. A plant may get along with little or no fertilizer if the soil is fairly fertile or was enriched at the outset, and ready mixed fertilizer is available at the stores so that with little knowledge of how or why to fertilize them, the plants may thrive. But pruning cannot be left to the winds and freezes, nor can it be purchased over the counter, and only when certain principles are clearly understood can pruning be practiced with satisfaction.

Let it be clear at the outset that some woody plants need little or no pruning, and certainly need no regular attention in this regard. But except in a completely naturalistic woodland garden, some pruning will be desirable at times. Pruning should never be done without there being a definite reason in mind for doing it, and so we may well consider a few good reasons for a need of pruning. For we can apply fertilizer at odd times and in haphazard fashion much more safely than we can prune as fancy directs. However, pruning can never be a substitute for adequate cultural care — only a valuable adjunct to it.

Shrubs may need regular and systematic pruning for (1) maintaining a shapely and compact form and persuading plants to stay within desired limits of size, (2) increasing the profusion of bloom, or (3) continuous renewal of flowering or vegetative branches by replacement of old branches by new shoots. Pruning at irregular intervals may be needed for (4) removal of dead, diseased or injured branches, (5) rejuvenation of old plants, or (6) the reduction of top needed in transplanting.

Trees are less often in need of regular pruning than shrubs, but need attention with pruning tools (1) to develop a symmetrical shape, (2) to avoid bad crotches or crossed branches, and (3) for reasons 4 and 6 as above given under Shrubs. The

first two items are almost wholly concerned with quite young trees, but transplanting is not limited to them.

Pruning for improvement of the vegetative appearance of the plant and to increase the abundance of flowers and fruit are usually somewhat independent objectives for the average gardener, and so they will be discussed separately, but with full realization of the dependence of one on the other. To accomplish these objectives, it is necessary to understand certain basic principles of plant anatomy and physiology.

In pruning for vegetative vigor and appearance, one of the important principles is an apparent paradox — pruning is usually an invigorating process and yet it is always a dwarfing process. Actually we note an increase in vigor of the shoots which develop, but since fewer shoots develop after pruning, there is really less total growth. We gladly sacrifice a large total growth for a less amount of more desirable form or vigor. Thus, weak shrubs or vines are heavily pruned back in order that a more vigorous growth may result from the reduction of demand upon the root system. And we prefer a small compact shrub to a large straggling one. When one side of a tree is weaker than the other side, however, we cut back the strong rather than the weak. For in this case we have an unbalanced load to put in balance, rather than an evenly distributed overload for the roots such as the weak plant represented.

A second basic principle is found in the tendency of most shrubs to make growth chiefly from the buds at the tip of branches, resulting in a rather open form. In order to ob-

tain a compact bushy habit of growth, it is necessary to prune these plants severely when they are young, thus assuring the development of lateral branches close to the ground. Further pruning for the same objective will prevent long rangy growth being made. The buds nearest the pruning cut will nearly always be the ones which develop.

Different types of shrubs will require different pruning, depending on the results desired. Foundation plants should be compact in habit, and we prune them largely by frequently pinching back of young growth. This is preferable to an annual severe heading back to the same bounds, which may leave large stubs exposed and little surface foliage. Similarly we prune formal hedges to definite form by "barbering" them, and this is better done at intervals during the growing season than left for a single severe annual cutting. Informal hedges should never be barbered, since this destroys their normal and characteristic appearance. They should be restrained within desired bounds by a thinning process, reaching back into the plant mass to remove longer branches at their junction with shorter ones without destroying the general symmetry or habit of the plant. This process also reduces crowding and increases the vigor of the remaining branches.

Limbs or branches which are dead, diseased, insect infested or injured so that they are likely to die should be pruned out in order to prevent spreading of decay or infection to other parts of the plant. Such cuts should always be made where the offending branch arises from a larger one, or where a vigorous lateral

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branch will be left to carry on, so that no projecting stub is left to die back and decay.

Trees or shrubs injured by cold need special pruning attention. A brief examination of the bark of many shrubs will show whether it is dark next the wood at the ground level — indicating that the plant is killed to the ground — or is green for some distance above ground. In the former case the shrub can be cut off at the ground at once. In the latter case, it should be cut back only until sound green tissue is found. For reasons of appearance, this may be done soon after the freeze, but there is no other need to prune before new growth shows where the plant is still vigorous.

In pruning for flower and fruit production, it is important to know something of the flowering habits of the plant concerned. Many deciduous trees and shrubs form their flower buds in the growing season preceding their bloom, while many evergreen plants differentiate flower buds just before the bloom period. In all cases, however, pruning is directed either to restraining these plants within bounds or to causing abundant development of new twigs which will flower later. Pear trees fruit on old twigs year after year, and are seldom pruned, while peaches and plums flower and fruit only on wood of the previous growing season and are pruned rather heavily each spring to produce abundant growth for the next year's flowering.

The time of pruning is an important phase of the problem, especially with flowering shrubs. As a general rule, we prune spring or late winter flowering shrubs in early summer, as soon as the bloom is ended. This gives a long growing period for vegetative activity in preparation for the next blooming, and prevents possible loss of flowering buds if pruning is done in winter, as well as conserving energy which might go into undesired fruiting. Note, however, that winter and spring blooming azaleas should not be pruned for compact habit until the new spring growth has matured somewhat in early summer, but before August, when the flower buds will be differentiating. Roses are pruned for rejuvenation, and so their pruning is done just prior to a season of growth and bloom, since they flower on new shoots only. This is the time for the spring cutting back of old roses to a few buds on the more vigorous canes. Shrubs which flower in summer and autumn are best pruned after they have become fully dormant in winter, lest pruning delay the ma-

turing of the twigs and make them subject to early cold damage. Shrubs grown for foliage rather than for flowers should be pruned at the beginning of the growing season if they are of informal habit. Pruning wounds will heal most quickly at this season, and the plant will recover most rapidly any loss of attractive appearance. Pruning of shrubs of formal habit should be frequent during the growing season, as has been said. Shade trees should be pruned at the end of the dormant season, like informal shrubs.

Let us, therefore, sharpen our

pruning shears and set about the often long neglected process of promoting the attractiveness of our shrubs and trees by judicious and timely pruning.

FRUIT PROSPECTS GOOD

Dade county lime and avocado trees bloomed heavily and have set good crops of fruit, according to County Agent, Charles Steffani. Prospects for these two fruit crops are generally good.

Sensational Citrus Development

During my forty years as Citrus Nurseryman and Grower and during the past 15 years I have done much work in Research in Citrus. I now have to my credit One Navel Mutation that ripens its fruit in June and July and hangs in prime condition for 6 months — A more delicious orange has never been eaten by man.

A West Indian lime to improve the size and rid it of seed, and recently one of my selections has mutated and given me a seedless lime and one that puts on a fruit with each leaf.

Last but by no means least — the impossible — A SOUR ORANGE mutation, there being no history of such in the past. I HAVE IT — the parent tree,

right on my property — this in 1936 and to fill my cup with honor, Destiny touched me on the shoulder. The Government of Cuba cited me for her highest honor for my work in citrus research, with the medal of Carlos Manuel de Cespedes. This citation and medal came to me in March 1938. (See photo).

I extend an invitation to visit Cuba, to interested parties, to see and study this great mutation. Even if I were 60 years instead of 77, I would not sell this mutation, patent pending, for a million dollars, and while I am not preparing to die, I might be killed in an accident.

My health is 100% good and I know just how to keep it so. I am planting a 300-acre grove to my June-July navel and W. I. lime for a grubstake for my grand-children. All to be sold in New York.

I would like to sell a half or three-quarter interest to reliable parties for exploitation for a nominal cash payment and let the buyer finish the buy with money that can be earned by the business.

A DESCRIPTION OF THE SOUR ORANGE MUTATION

Fruit 25% larger than the regular sour orange, very acid, four year old buds are now full of fruit. August 1940 bloom now ripe with at least three other crops and still blooming. These buds on sour orange roots. Some 52-year-old grove set buds full of fruit for seed, seed beds with some 3000 plants 4 to 6 inches tall.

Not a thorn in a million trees, and not a leaf carrying scab, an occasional fruit with slight scab markings, leaves bi-colored, a light green splash on a dark green base, rear of leaf not affected in color. Nothing albino in coloring, seedlings from fruit produced no coloring in the leaves and generally free of thorns.

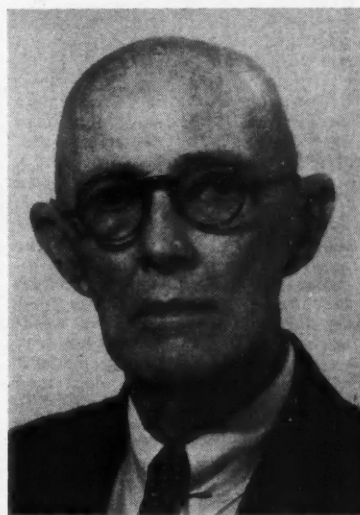
Trees fully everbearing, many fruits in clusters of 3 to 6 fruits very vigorous growing, fruits carrying 18 to 25 seed.

This wonderful everbearing rootstock will revolutionize the citrus fruit game. — Ask for appointment, letter or cable.

TOWNS — HOLGUIN (CUBA)

Thos. R. Towns

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The LYONIZER

Department

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Horticultural Hints

The LYONS FERTILIZER COMPANY has been making a determined effort to supply the growers of Florida with the best fertilizer that a combination of scientific and practical experience can make. We are more interested in doing this today than ever before, and we feel that today we are in better position than ever to render a truly worthy service to the growers of this state.

Our mixtures today are backed by 25 years of our own experience in both experimental work that we have done and from the application of this acquired information in a practical way. Further, we are abreast of the times as far as work done by other agricultural workers are concerned. We have consistently made it a practice to keep our field men thoroughly posted, and can definitely assure you that when you call these men to advise with you that you will find them informed about all problems having to do with the economical production of citrus fruits and other crops.

During the spring season we had unusual rains that have taken a large percentage of all soluble plant foods out of the root feeding zone, and we are suggesting that growers come in with an early summer application of fertilizer. Our trees have shown one of the heaviest blooms ever seen, and if we are to set this crop and carry it through to maturity it is necessary that we supply our trees with the proper plant food in adequate quantities to take care of not only the growing fruit but also the flush of growth that will come during the summer.

In making this summer application of fertilizer we want to remind every grower that nitrogen is not the only plant food that is leached from the soil. Magnesium, copper and many other essential elements are removed by leaching, and these elements should be replaced by adding them in your summer mixture. Speaking of these lesser essential elements we want to very forcibly urge you to include a complete range of these elements in not only this application but every application.

While we realize that fertilizer is one of the most important factors in the production of quality

Reports of Lyons Field Men . . .

SOUTHWEST FLORIDA

Citrus in this section is looking the best it has for several years and if we get enough rain during the next two months to properly set the new crop, prospects will be excellent for a bumper crop of all varieties this fall and next spring. Vegetable growers in the Ruskin and Palmetto areas suffered from the recent rains but are hoping for seasonal weather to complete this crop. Some cucumbers are being moved from Wauchula at the present time.

PINELLAS & HILLSBOROUGH COUNTIES

C. S. (Charlie) Little

Even though we have had considerable rain during the past two months it is now beginning to get dry throughout this territory, and unless we have more rain within the next few days a number of growers will start their irrigation systems. While a heavy bloom does not always mean that we are going to have a big crop, it certainly is a fact that we must have the bloom before it is possible to set a crop. This spring we have the orange bloom and if only a very small part of it is set we are go-

fruit, we want to stress the importance of your spray program. We strongly urge you to make a copper spray at this time to control melanose on your growing fruit. This disease alone is responsible for more fruit being thrown out of the top grade than all other factors combined, and if it starts on the small fruit there is no possible way to eliminate it later in the season.

In connection with the spray program we suggest that you include zinc in the early spray applications. This element is a valuable nutrient and will give excellent results in your better fruit program.

Young trees should be fertilized and cultivated often. Keep a close check on these young trees at this time for aphids. These insects are numerous and should be kept from the foliage of small trees.

Remove all dead wood from the trees during the summer months.

ing to have a large crop of fruit. This statement does not hold true for seedy grapefruit as on these trees we have had a very light bloom.

NORTH CENTRAL FLORIDA

H. C. (Doug) Dougless

We are now enjoying some real spring and early summer weather with plenty of moisture and ideal warm growing conditions. Fruit prices in this section remain just about within the same range as existed last month. Valencias are averaging around \$1 per box and grapefruit around 30c on the tree. All varieties of grapefruit is being cleaned up rapidly. Valencias are holding up well with most of the bad and coarse fruit moved.

POLK & HIGHLANDS COUNTIES

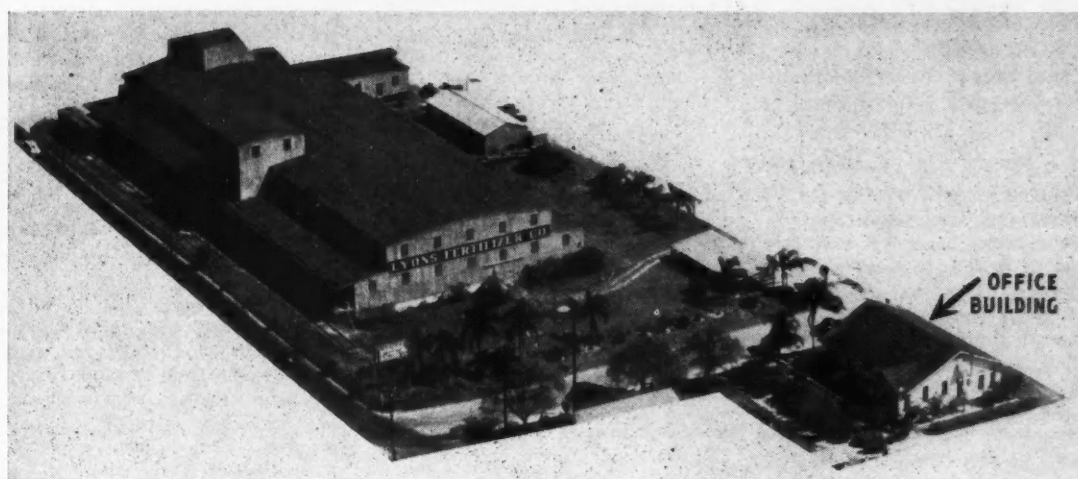
J. M. (Jim) Sample

Good growing weather still prevails in this territory, but unless rain comes at an early date our growers will have to start their irrigation systems. Trees have shed their bloom petals and early grapefruit still remain conspicuously short of bloom, but all other varieties have a good bloom. The quality of Valencias generally is deteriorating, but not yet seriously. However, the price has slumped a little but most growers feel that good quality and the right sizes will still bring good money in May. Many growers in this section are planning to get their summer application of fertilizer on early.

WEST CENTRAL FLORIDA

E. A. (Mac) McCartney

The vegetable section in vicinity of Plant City was hard hit by rains during the early part of April, but what crops they successfully brought through are looking good and growers are getting good prices for any commodity they have to put on the market. This has been a most adverse season for vegetable growers throughout the territory, and but for the excellent prices the season would have been a complete failure. Citrus groves everywhere are in fine shape and most of these properties have set a very fine crop of fruit.



This Is An Airplane View
Of Our Factory
In Which Is Produced The Fertilizer
About Which Leading Growers
Of The State
Have Paid Their Tributes
On This Page
For Many Months Past

The relative size of this plant may be visualized when it is compared with the freight car shown beside it at the front of the building . . . The structure is 130 feet by 300 feet and the building, as well as the equipment used in the manufacture of our fertilizers, are among the most modern in the entire state . . . Two steel mixing units of most modern design serve in the manufacture of Lyons Fertilizers and the capacity of this plant is 40,000 tons annually . . . The railway side track enables us to load or unload 24 freight cars at our plant at the same time . . . Right now there are in excess of 6,000 tons of material stored in this plant in readiness for the summer application.

Visitors Are Always Welcome To Inspect Our Plant

Army Buying Citrus Fruit For Camp Blanding

A total of 943 boxes of oranges and 391 boxes of grapefruit will be purchased from April 24 to May 9 by the Army's new quartermaster market center in Jacksonville, for consumption at Camp Blanding.

Florida citrus producers have been requested to submit bids by letter, telegraph or telephone, stating price and conformity to the specifications outlined in the first notice issued by the Army. Although previously U. S. No. 1's were desired, the new specifications, which have been sent in bulletin form to all Florida citrus shippers by the Florida citrus commission, call for a combination grade. Future requirements must be obtained from the market center.

A list giving locations and local addresses, with names of commissioned officers and marketing specialists in charge of 30 quartermaster market centers, has been released by John R. Martin, chief of the perishable foods section of the subsistence and supply branch, division of purchase, O. P. M. Issuance of this list accompanied a new setup which now centralizes the buying of fresh fruits and vegetables through the 30 purchasing offices.

Each office is headed by a commissioned officer from the quartermaster corps, assisted by an experienced civilian produce buyer carrying the title of "marketing specialist." The Florida office, located in the Exchange building, 218 W. Adams Street, Jacksonville, is in charge of Lieut. N. K. Browne. August Stoerk is the marketing specialist.

Those in Florida who wish to sell to the Army are urged to keep in close touch with this office. It is essential that they familiarize themselves with Army specifications as to grade, condition and type of package. The marketing specialist should be consulted, as he will wish to know in advance what the available supplies are, in order that he may arrange his buying program accordingly. Home grown commodities are to receive first consideration, providing specifications for pack, quality and condition are met, and providing sellers are in a position to deliver required quantities at bids which are in line.

Each market center is responsible for purchasing the total fresh fruit and vegetable requirements of all posts in its area, the requirements be-

ing purchased through competitive bidding, f. o. b., destination or delivered to the camp. Specifications are based on federal grades, and the quantities desired will be posted at each market center around the 1st and 15th of each month for the following two-week period. All reliable jobbers, commission merchants, shippers and growers will be considered eligible to participate in the bidding. Fruit will be carefully inspected by Army experts at point of delivery when it is bought in carload lots. In smaller transactions, inspection may be made at both point of purchase and delivery.

The new system is known as the field ration system and is a change from what was known as the garrison system. Under the new arrangement, supplies are bought on a commodity basis and every unit in the Army will receive the same menu each day. Each quartermaster, guided by the directors of the corps area commanders, will make his needed requisitions to the marketing centers for fresh fruits and vegetables.

Bidding will be open, with the lowest bid securing the business, and it must be made prior to the closing time listed by the Army. A federal-state preliminary inspection certificate must accompany invoice, showing that merchandise is in grade at shipping point. Final inspection and acceptance will be made at destination.

ORLANDO HORTICULTURAL SOCIETY MEETING SUCCESSFUL AFFAIR (Continued from page 5)

room to the limit. Under genial Karl Lehman's supervision as toastmaster distinguished visitors were introduced and the program consisted of a most interesting floor show. There were no speeches.

The constantly growing interest in the efforts being made by the Horticultural Society to be of service to the growers of Florida is, in our opinion, becoming more widely recognized with each passing year and the good work it is doing we are certain is going to continue to increase the annual attendance at its meetings to add even greater prestige to its endeavors.

TEXAS GRAPEFRUIT HARVEST EXTENDED THROUGH MAY 31

Because of heavy rains which have greatly hindered the harvesting of grapefruit, regulations of the Mexican fruitfly quarantine have been modified to extend the harvesting season to the close of May in the Texas counties of Brooks, Cameron, Hidalgo, and Willacy—provided conditions of infestation do not necessitate an earlier closing — Dr. Lee A. Strong, Chief of the Bureau of Entomology and Plant Quarantine, has announced.


The harvesting season normally closes, under the regulations, on April 20, except that in the counties of Dimmit, LaSalle, and Webb, it closes on the last day of February, and no extension of the season was granted to these latter counties.

The season for harvesting Valencia oranges in the counties of Brooks, Cameron, Hidalgo and Willacy, was, last December, extended from April 30 to the close of May for the year 1941. Under the present order, no sterilization of the fruit is required. However, should conditions of infestation develop which would warrant the sterilization of citrus fruit shipped from the four counties, such action will be taken, Dr. Strong states.

The extension of the harvesting season for these fruits was announced after consultation with the Texas State Department of Agriculture.

Florida has about 30,000 citrus groves, nearly 400 packing houses, and about 300 sales and marketing organizations.

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Adjustments In Agriculture

In keeping with the general trend of events, I think it is proper to say that agricultural people expect to share a definite responsibility now as never before. These responsibilities are not confined to any class of agricultural worker. They rest with the United States Department of Agriculture in all its branches and divisions, with the State Colleges of Agriculture, Experiment Stations and Extension Services, with farm and commodity organizations, also with State Departments of Agriculture, and divisions of state governments affecting Agriculture, to farmers, land owners, and all others with an interest in Agriculture. These responsibilities open ways and means of cooperation and of service, and no one can properly escape them if he performs his rightful duties.

There is a very definite effort and expansion of programs to get food and clothing to the low-income groups in the cities and rural sections of this country. We have surpluses that can be absorbed if they can be made available. Many people are said to be under-fed or improperly fed and a great many more have insufficient clothing and housing facilities. Now that defense spending is underway, an enormous amount of money is being used for defense; there is an easy flow of money that tends to bolster farm markets in spite of reduced exports. The Government is taking over surpluses of cotton, wheat, and corn, and removing them from trade channels. This means that surpluses are continuing to be piled up and protected by government loans and government storage.

Agriculture is ready and prepared to participate in this lend-lease program for sending cotton, wheat, tobacco, and other farm commodities to Britain. The war abroad has almost eliminated the foreign markets for farm products. The one big European market for American cotton and other commodities has begun to disappear even before this war, due to a condition that arose out of the last war, compelling European nations to grow their own. At present, the British are short of money and are turning to Brazil for cotton and to Canada, Argentina, and Australia for wheat and meat, and to Turkey for tobacco, and are giving up, to a large extent, the use of fruits dur-

A. P. SPENCER
Vice Director State Agricultural
Extension Service

ing this tremendous emergency. Britain once secured 14 percent of her food on the American markets, but in 1940 she purchased less than two percent. During last December the United States supplied only two-tenths of one percent of her food products and that was equally true with cotton and canned foods. The U. S. Department of Agriculture reports that cotton exports on January 1 were off 84 percent, and these exports have dropped to the lowest level in 70 years.

We have been accustomed to thinking that all would end well if everyone would work hard and save. That principle of thrift should not be overestimated. It is the one thing above

all that will lead us out of uncertainties quicker and better than anything else we can do, but we must do this intelligently. If it is a fact that we cannot export cotton, then we must grow less or find other uses for it. If it is a fact that the demand for our flue-cured tobacco is not in this country, we will pile the surpluses still higher unless we do something about it. To me it is clear that to make such adjustments as this suggests, means a very great change in our Southern Agriculture.

We went through a depression from 1932 to 1935 and the effects of that depression linger with us. These great problems of unemployment and huge government expenditures concern all of us and are to be reckoned with. The national debt limit is now raised to 65 billions and interest must be paid on this by the people of the United States. That means more taxes for everyone who

Uncle Natchel says:

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help you make larger
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can pay them. Those taxes must be raised where there is revenue. We may not think they will hit the small farmer directly, especially if his income is so low that he cannot pay taxes, but for every plow he buys, for every pound of nails he buys, for each pair of shoes, each shirt, and even down to the working tools on the farm, the manufacturer of these articles will be called on to bear some of this burden.

The farmers are vitally concerned as to the outcome of the farm situation regardless of who wins this war, and the hope is that the farmers of this country will be in a position to adjust themselves and be prepared for any changes and modifications that apparently stand out before them as necessary for their very existence. Some folks want farm control — and tighter farm control at that. They also want processing taxes to make sure that the farmers will receive a reasonable income from the products that are consumed in this country, and, of course, they want compulsory controls on the production and marketing of these crops. There is another group that is more vitally concerned about the income of the small farmers, the renters and the sharecroppers.

The government says that the Agriculture College, The Experiment Station and Extension Service have the responsibility of finding out the best practices and of making the best information available to the farmers of this country. That includes all phases of agriculture and home economics. It means, that if we have varieties of corn that are better than others, the information about this corn should be made available to every farmer. It means that if one feeding practice to fatten cattle is better than others, that information should be available to every farmer regardless of whether he can read or write. It means continued stress on the programs that the Agricultural Extension service has had in effect for about a quarter of a century.

Then we have the Agricultural Adjustment program. They have to do with payments to farmers to help them get a larger share of the national income. We have the Farm Security Administration to deal with farm and home problems of many small farmers who are going through a struggling existence, trying to help them in getting a better income and to improve their situation. Then we have the Soil Conservation Service, Rural Electrification, and Vocational Agriculture. These various agencies with all their contacts among people

are in a position, with the help of cooperating farms and farm homes, to formulate the nearest to a correct understanding of our needs and situation. Now, out of this can come confusion galore, misunderstandings, misapplications of facts, misgivings, a total waste of federal monies, and a highly dissatisfied public unless a good understanding exists among those people who direct Agricultural and Home Economics programs and the people living on farms.

I would not anticipate that every farmer will be self-supporting and self-sufficient nor would I expect all to agree on a single program, but I do think that Agriculture must assume a responsibility in the defense program and plan for the time ahead when this vast effort and easy flow of money has again changed the situation and farm people face a situation not different from our experiences in between 1932 and 35.

I need not tell you that there are two doctrines in this world, diametrically opposed to each other — the Nazi doctrine of rule by an arrogant dictator that may even determine life or death according to the dictates of a dictator, and then the democratic government, the kind that we enjoy, the kind that we have in America and England. We do not believe that we can live in peace as we now enjoy it should Nazism, Fascism, and Communism dominate the rest of the world. Whatever the situation may be at the close of this war or whatever happens in Europe, we are deeply conscious of the serious situation facing all people and our responsibility in all the states is primarily concerned with Agriculture.

THE PART OF FLORIDA FRUIT AND VEGETABLE PRODUCTION IN THE DEFENSE PROGRAM.

(Continued from page 4)

the American way of living, of thinking, and of worshiping may survive and its blessings be extended to the other nations of the world where there is still an appreciation of what freedom means to mankind.

Let us all do our part!

HEAVY ORANGE BLOOM

Orange bloom in Lake county has been unusually heavy and trees are in excellent condition, according to County Agent R. E. Norris. By April 1, grapefruit had not put on a very heavy bloom, but Lake's growers commented humorously that seeded grapefruit "don't have to bloom to put on a crop."

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SUPERIOR CITRUS TREES of principal varieties. Also Persian limes and avocado trees and new varieties of tangelos. None injured by cold. Ward's Nursery, Avon Park, Florida.

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PLANT SOAR'S SWEET ORANGE trees for profit, fruit sells in September for \$1.12½ to \$1.50 per box. No losses from drops or frozen fruit, does not dry out on lemon. Pomona Nurseries, Dade City, Fla.

FOR SALE—Casurina Lepidophloia Florida's best windbreak trees \$5.00 per 100 — \$45.00 per 1000. S. F. Matthews, Homestead, Fla.

MACHINERY: Complete for 4 or 5 car capacity packinghouse, includes Coloring Room Equipment, Low Pressure Steam Boiler, Water Tank and Steel Tower. Sacrifice price for whole or part. Box 1987, Tampa.